## First Year

1. **CHEM 105 (C-PN) (1st semester)**  
   Prereq – one year of HS Chemistry, Math placement above MATH 102

2. **CHEM 107 (2nd semester)**  
   Prereq – CHEM 105 or instructor’s consent

3. **MATH 131 (C-QR)**  
   Prereq – 4 yrs college prep math in HS or MATH 115

4. **MATH 132**  
   Prereq – MATH 131 or 124

5. **THRS 117 (C-TF)**

6. **PHIL 120 (C-PF)**

7. Core Curriculum

8. Elective/Minor

## Second Year

1. **CHEM 220 (1st semester)**  
   Prereq – CHEM 107

2. **CHEM 211 (1st semester)**  
   Prereq – CHEM 107

3. **CHEM 222 or CHEM 232 (2nd semester)**  
   Prereq – for CHEM 222 – CHEM 220; for CHEM 232 – CHEM 220 (grade of C or above)

4. **CHEM 312 (2nd semester)**  
   Prereq – CHEM 211 (grade of C or above)

5. Core Curriculum

6. Core Curriculum

7. Elective/Minor

8. Elective/Minor

## Third Year

1. **PHYS 121 or PHYS 111 (1st semester)**  
   Coreq – for PHYS 121 – MATH 131 or equivalent

2. **PHYS 122 or PHYS 112 (2nd semester)**  
   Prereq – for PHYS 122 – PHYS 121 and MATH 131; for PHYS 112 – PHYS 111

3. **CHEM 305**  
   Prereq – CHEM 222 or CHEM 232, and CHEM 312

4. Chemistry Elective

5. Core Curriculum

6. Core Curriculum – Advanced Requirement

7. Elective/Minor

8. Elective/Minor

## Fourth Year

1. **CHEM 330 (1st semester)**  
   Prereq – CHEM 211 and CHEM 222 or CHEM 232, MATH 132

2. **CHEM 332 (2nd semester)**  
   Prereq – CHEM 330

3. Chemistry Elective

4. Core Curriculum – Advanced Requirement

5. Core Curriculum – Advanced Requirement

6. Elective/Minor

7. Elective/Minor

8. Elective/Minor

Elective/Minor courses can be used to take additional core curriculum courses, major courses, free electives, or to fulfill a minor.

This paradigm assumes that you will meet the second language competency by taking a language course at the 102 level. If you need to start at 101, then one of the electives will be used for that course.
Required Courses:

- CHEM 105 – General Chemistry 1
- CHEM 107 – General Chemistry 2
- CHEM 211 – Quantitative Analysis
- CHEM 220 – Organic Chemistry
- CHEM 312 – Instrumental Analysis
- CHEM 330 – Physical Chemistry 1
- CHEM 332 – Physical Chemistry 2
- MATH 131 – Calculus and Analytic Geometry 1
- MATH 132 – Calculus and Analytic Geometry 2
- PHYS 121 – General Physics 1 or PHYS 111 – Fundamentals of Physics 1
- PHYS 122 – General Physics 2 or PHYS 112 – Fundamentals of Physics 2

General Chemistry Concentration

- CHEM 305 – Inorganic Chemistry
- CHEM Elective (300+)
- CHEM Elective (300+)

Note – Students intending to go on to graduate studies should realize that mathematics courses such as MATH 233 and MATH 310 are required by many graduate programs in Chemistry. The Chemistry discipline also recommends PHYS 121/122 over PHYS 111/112.

The following courses meet the CHEM major and Core Curriculum requirements:
CHEM 105 – C-PN
MATH 131 – C-QR
PHYS 121 – C-PN
## First Year

1. **CHEM 105 (C-PN) (1st semester)**  
   Prereq – one year of HS Chemistry, Math placement above MATH 102

2. **CHEM 107 (2nd semester)**  
   Prereq – CHEM 105 or instructor’s consent

3. **BIOL 120 (1st semester)**

4. **BIOL 121 (2nd semester)**  
   Prereq – BIOL 120

5. **MATH 131 (C-QR)**  
   Prereq – 4 yrs college prep math in HS or MATH 115

6. **MATH 132**  
   Prereq – MATH 131 or 124

7. **THRS 117 (C-TF)**

8. **PHIL 120 (C-PF)**

## Second Year

1. **CHEM 220 (1st semester)**  
   Prereq – CHEM 107

2. **CHEM 211 (1st semester)**  
   Prereq – CHEM 107

3. **CHEM 222 or CHEM 232 (2nd semester)**  
   Prereq – for CHEM 222 – CHEM 220; for CHEM 232 – CHEM 220 (grade of C or above)

4. **CHEM 312 (2nd semester)**  
   Prereq – CHEM 211 (grade of C or above)

5. **BIOL 244 (1st semester)**  
   Prereq – BIOL 120 and BIOL 121 (grade of C or above in both)

6. **Core Curriculum**

7. **Core Curriculum**

8. **Core Curriculum**

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This paradigm assumes that you will meet the second language competency by taking a language course at the 102 level. If you need to start at 101, then one of the electives will be used for that course.

### Third Year

1. **PHYS 121 or PHYS 111 (1st semester)**  
   Coreq – for PHYS 121 – MATH 131 or equivalent

2. **PHYS 122 or PHYS 112 (2nd semester)**  
   Prereq – for PHYS 122 – PHYS 121 and MATH 131; for PHYS 112 – PHYS 111

3. **CHEM 310**  
   Prereq – CHEM 222 or CHEM 232 (grade of C or above)  
   or CHEM 305  
   Prereq – CHEM 222 or CHEM 232, and CHEM 312

4. **BIOL 373 (2nd semester)**  
   Prereq – BIOL 244 (grade of C or above)

5. **Core Curriculum**

6. **Core Curriculum – Advanced Requirement**

7. **Elective/Minor**

8. **Elective/Minor**

### Fourth Year

1. **CHEM 350**  
   Prereq – BIOL 244 (grade of C or above, or instructor’s consent) and CHEM 222 or CHEM 232 (grade of C or above)

2. **CHEM 351 (alternate years – 2014/15, 2016/17)**  
   Prereq – CHEM 350 (grade of C or above)

3. **CHEM 330 (1st semester)**  
   Prereq – CHEM 211 and CHEM 222 or CHEM 232, MATH 132

4. **CHEM 332 (2nd semester)**  
   Prereq – CHEM 330

5. **Core Curriculum – Advanced Requirement**

6. **Core Curriculum – Advanced Requirement**

7. **Elective/Minor**

8. **Elective/Minor**

Elective/Minor courses can be used to take additional core curriculum courses, major courses, free electives, or to fulfill a minor.

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September, 2014 (CC update spring 2015)  
Page 3
Required Courses:
☐ CHEM 105 – General Chemistry 1
☐ CHEM 107 – General Chemistry 2
☐ CHEM 211 – Quantitative Analysis
☐ CHEM 220 – Organic Chemistry
☐ CHEM 312 – Instrumental Analysis
☐ CHEM 330 – Physical Chemistry 1
☐ CHEM 332 – Physical Chemistry 2
☐ MATH 131 – Calculus and Analytic Geometry 1
☐ MATH 132 – Calculus and Analytic Geometry 2
☐ PHYS 121 – General Physics 1 or PHYS 111 – Fundamentals of Physics 1
☐ PHYS 122 – General Physics 2 or PHYS 112 – Fundamentals of Physics 2

Biochemistry Concentration
☐ BIOL 120 – General Biology 1
☐ BIOL 121 – General Biology 2
☐ BIOL 244 – Genetics
☐ BIOL 373 – Molecular Biology
☐ CHEM 305 – Inorganic Chemistry or CHEM 310 – Organic Chemistry III
☐ CHEM 350 – Biochemistry 1
☐ CHEM 351 – Biochemistry 2

Note – Students intending to go on to graduate studies should realize that mathematics courses such as MATH 233 and MATH 310 are required by many graduate programs in Chemistry. The Chemistry discipline also recommends PHYS 121/122 over PHYS 111/112.

The following courses meet the CHEM major and Core Curriculum requirements:
CHEM 105 – C-PN    PHYS 121 – C-PN
MATH 131 – C-QR
Core Curriculum (2014-2016)

Foundations – to be taken during a student’s first year

☐ TF – Theological Foundations
   THRS 117, Other ________________

☐ PF – Philosophical Foundations
   PHIL 120, Other ________________

Required by the end of the second year

☐ WI – Writing Intensive – Writing intensive courses may be drawn from any of the Foundations courses or from any of the General Core Requirements courses at the 100 or 200 level.

   Any course designated C-WI (course, section, semester)_______________, ENGL 101, ENGL 150, ENGL 221, FREN 305, GERM 304, HONR 100, HUMA 100, , Other ________________

☐ QR - Quantitative Reasoning
   CSCI 110, CSCI 150, MATH 123, MATH 124, MATH 131, MATH 132, MATH 212, MATH 220, SSCI 224, Other ________________

Required by the end of the third year

☐ SL – Language Competency – SNC courses - French, German, Hebrew, Japanese, Latin, Greek, Spanish at the 102 level. Requirement can be met by placement testing at the 203 level or beyond, transferring in an approved course at the 102 level or beyond, or successfully taking a course at the 102 level.

   FREN 102, GERM 102, GREEK 112, HEBREW 102, JAPANESE 102, LATIN 102, OPERATION 102, SPANISH 102, SPANISH 103,
   Other (Transfer) ____________________

   Or Placement Score > 349 (indicate score) ________________

September, 2014 (CC update spring 2015)    Page 5
General Core Requirements – can be taken any time, 
Advanced Requirements – to be taken during a Junior or Senior year – three courses, any General Core Requirement courses at the 300 or 400 level

☐ BB – Beyond Borders

ENGL 228, FREN 252, GEOG 140, HIST 118, HIST 120, HIST 122, HIST 130, HUMA 280, INTL/POLI 150, PHIL/THRS 265, SSCI 129, Other ______________

Advanced - CLAS 335, COME 343, ECON 357, ENGL 356, FREN 375, GEOG 363, GERM 376, JAPN 375, NSCI 310, NSCI 348, PEAC/POLI 352, POLI 362, POLI 368, POLI 410, SPAN 365, SPAN 370, SPAN 375, THRS 339, THRS 340, THRS 343, Other ______________

☐ CI - Catholic Imagination

ENGL 240, HUMA 215, THRS 201, THRS 219, Other ______________

Advanced - CLAS/THRS 327, HUMA 337, PEAC/THRS/WMGS 318, PEAC/THRS 333, THRS 310, THRS 312, THRS 314, THRS 316, THRS 320, THRS 322, THRS 325, THRS 338, THRS 350, THRS 355, THRS 360, THRS 361, THRS 433, Other ______________

☐ DD – Difference and Diversity

AMER/HIST 114, AMER/HIST 115, AMER/THRS 221, AMER/HUMA 261, ENGL 221, GEOG 155, GEOG 225, HUMA/WMGS 110, POLI 232, Other ______________

Advanced - AMER/MUSI 318, COME 330, HIST 368, HUMA 301, HUMA 422, SOCI/WMGS 346, SSCI 408, Other ______________

☐ EI – Expression and Interpretation

ART 141, ART 144, ART 145, ART 205, ENGL 150, ENGL 203, HUMA 100, MUSI 150, MUSI 176, THEA 101, THEA 102, THEA 237, WOLT 210, Other ______________

Advanced - CLAS/PHIL 334, FREN 305, GERM 304, GERM 305, HUMA 313, MUSI/PHIL 336, SPAN 301, SPAN 302, Other ______________

☐ IS – Individual and Society

AMER/POLI 130, BUAD 180, ECON 101, ECON 102, EDUC 130, LEAD 200, PSYC 100, SOCI 100, Other ______________

Advanced - CSCI 310, POLI 310, Other ______________

☐ PN – Physical and Natural World

BIOL 105, BIOL 106, BIOL 108, CHEM 100, CHEM 105, EDUC/GEOL 287, GEOG 120, GEOL 105, GEOL 107, GEOL 109, GEOL 115, PHYS 100, PHYS 111, PHYS 121, PHYS 141, Other ______________

Advanced - ENVS 300, NSCI 358, SSCI 301, Other ______________

☐ WT – Western Tradition

AMER/MUSI 184, ART 110, ART 112, ART 115, BIOL 107, ENGL 212, HIST 112, HIST 113, HUMA 240, PHIL 250/THRS 255, Other ______________

Advanced - AMER/PHIL 305, CLAS/WOLT 325, COME/POLI 329, ECON 300, ENGL 321, ENGL 385, FREN 328, GERM 375, HIST 345, HIST 350, HIST 370, HUMA 403, HUMA 411, HUMA 422, MUSI 315, PHIL 310, PHIL 330, SOCI 352, THEA 337, WOLT 320, Other ______________